CATCH US IF YOU CAN

Digital Cameras by Allied Vision Technologies

ALLIED
Vision Technologies

Allied Vision Technologies: Leading in the World of Digital Cameras

Founded in the year 1989, Allied Vision Technologies is a global leading manufacturer of digital machine vision cameras. AVT cameras are well suited for a wide variety of vision applications including industrial inspection, scientific and medical imaging, logistics, security, traffic surveillance and even multimedia and interactive entertainment.

Cameras for all Applications

AVT offers one of the largest camera portfolios with digital interfaces in the market, featuring a large number of monochrome, color and infrared-sensitive sensors in resolutions from VGA (0.3 MPixels) up to 29 MPixels. The different camera families provide a large choice of form factors, image optimization functions and interfaces for any application. Beside standard models, the AVT portfolio also includes high-performance cameras in the visible and non-visible spectrum for demanding applications such as high-speed, infrared or thermal imaging.

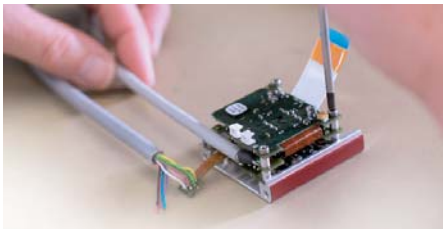
Allied Vision Technologies is also well recognized in the market as the specialist for camera customizations. Thanks to the AVT Modular Concept, a wide range of modifications such as angled heads, board-level versions, medical housings or alternative cable outlets are available “à la carte”. AVT also has a strong expertise in specific OEM camera development.

AVT cameras come with powerful Software Development Kits (SDKs) that ensure optimal performance and an easy implementation with the most popular operating systems and a large number of third party libraries.

High-Quality Products and Service

As a global market leader, Allied Vision Technologies is committed to the highest quality standards in the industry. All AVT cameras are manufactured in the company’s own facilities in Germany and Canada by highly qualified staff according to an ISO 9001-certified total quality management.

Purchasing a camera from AVT also means relying on first-class service and excellent world-wide technical support. Selected distributors in more than 30 countries and dedicated AVT staff in Europe, North-America and Asia ensure a high level of support is provided during the whole life cycle of a camera.



All cameras from Allied Vision Technologies are developed, manufactured, assembled and customized by highly qualified personnel.

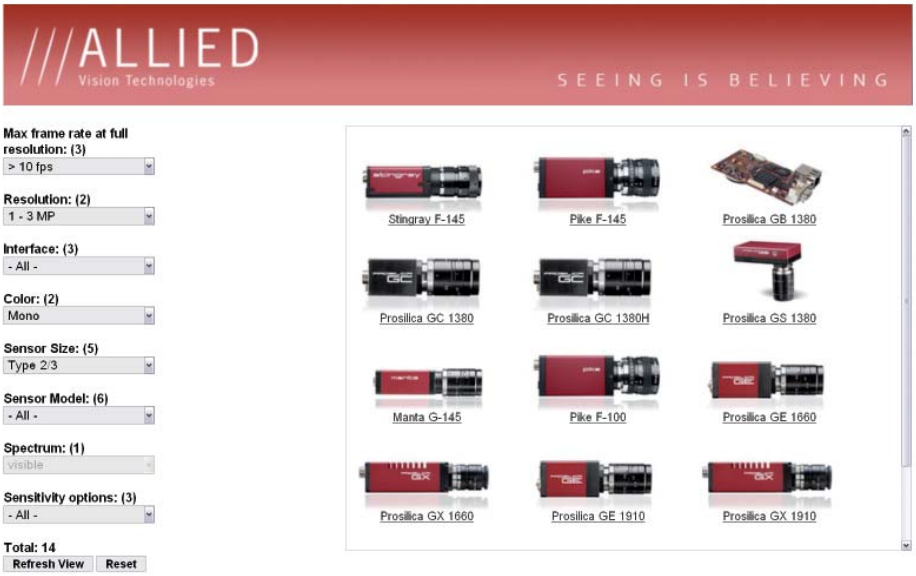
Choosing the right Camera from Allied Vision Techologies

AVT's Online Camera Configurator

AVT's Online Camera Configurator is a convenient online tool for displaying and sorting AVT's cameras according to your criteria. For example if you are looking for a certain sensor model, the Online Camera Configurator shows all AVT cameras with this sensor at one glance.

Among others, it is also possible to show all cameras within a resolution range (e.g. 3 to 6 Megapixels), or to display all available cameras with a type 2/3 sensor. You can also display cameras with the spectral range of you choice.

Additionally, all of your preferred searching criteria may be combined as requested.



Online Camera Configurator on alliedvisiontec.com
http://www.alliedvisiontec.com/emea/camera-configurator.html

Contact and Expert Advice

For expert advice which camera fits your application best, our experienced staff will be happy to help you choose the right camera. Allied Vision Technologies is represented in more than thirty countries worldwide. Please find the AVT branch office and the distributor sales network in your region on our website:

www.alliedvisiontec.com

Allied Vision Technologies GmbH (Headquarters)
Taschenweg 2a
07646 Stadtroda
Germany
Tel: +49 36428-677-230 Fax: +49 36428-677-28
E-mail: info@alliedvisiontec.com

Allied Vision Technologies Inc.
38 Washington Street
Newburyport, MA 01950 USA
Toll Free number +1-877-USA-1394
Tel: +1 978-225-2030 Fax: +1 978-225-2029
E-mail: info@alliedvisiontec.com

Allied Vision Technologies Asia Pte. Ltd.
82 Playfair Road
#07-02 D'Lithium
Singapore 368001
Tel: +65 6634-9027 Fax: +65 6634-902
E-mail: info@alliedvisiontec.com

ALLIED VISION TECHNOLOGIES GMBH Marketing and Sales | Taschenweg 2a | 07646 Stadtroda | Germany
Phone: +49 36428-677-230 Fax: +49 36428-677-28 | www.alliedvisiontec.com | info@alliedvisiontec.com

The right camera for every application

Simple & Easy

Economical price • VGA to 5 Megapixels • Sony CCD sensors

Guppy PRO – IEEE 1394b

Prosilica GC – GigE Vision

Smart & Flexible

Versatile, flexible cameras • VGA to 29 Megapixels • Sony and Kodak CCD sensors, CMOSIS sensors

Manta – GigE Vision

Prosilica GS– GigE Vision

Stingray – IEEE 1394b

Prosilica GT– GigE Vision

Bigeye – GigE Vision

Special & Custom

NIR/SWIR and LWIR cameras • InGaAs and Microbolometer sensors

Goldeye – GigE Vision, Camera Link

Pearleye – GigE Vision

Fast & Sharp

High data rates, high speed • VGA to 29 Megapixels • Kodak and Sony CCD sensors • CMOS sensor

Prosilica GE – GigE Vision

Bonito – Camera Link

Prosilica GX – GigE Vision Double Speed

Pike – IEEE 1394b

Guppy PRO. Small size, big quality.

Guppy PRO

- Very attractive price
- Very small
- Optocoupled 12-pin I/O
- Lightweight, robust metal housing

***All data for Guppy PRO F-095C are preliminary**

Guppy PRO									
L x W x H = 44.8 x 29 x 29 mm incl. connectors, w/o tripod and lens. Mass 80 g									
Model		**Interface**	**Resolution**	**MPixels**	**Frame rate**	**Sensortype**	**Sensor**	**A/D**	**Memory**
F-031B/C		1394b	656 x 492	0.3	123 fps	1/4 CCD	Sony ICX618	14 bits	n/a
F-032B/C		1394b	656 x 492	0.3	82 fps	1/3 CCD	Sony ICX424	12 bits	n/a
F-033B/C	**NEW**	1394b	656 x 492	0.3	85 fps	1/2 CCD	Sony ICX414	14 bits	n/a
F-046B/C	**NEW**	1394b	780 x 580	0.5	62 fps	1/2 CCD	Sony ICX415	14 bits	n/a
F-095C*	**NEW**	1394b	1280 x 720	0.9	35 fps	1/3 CCD	Sony ICX692	14 bits	n/a
F-125B/C		1394b	1292 x 964	1.2	31 fps	1/3 CCD	Sony ICX445	14 bits	n/a
F-146B/C		1394b	1388 x 1038	1.4	17 fps	1/2 CCD	Sony ICX267	12 bits	n/a
F-201B/C		1394b	1624 x 1234	2	14 fps	1/1.8 CCD	Sony ICX274	12 bits	n/a
F-503B/C		1394b	2588 x 1940	5	13 fps	1/2.5 CMOS	Aptina MT9P031	12 bits	n/a

Guppy PRO Cameras

The Guppy PRO is AVT's smallest FireWire camera. It is equipped with a fast 1394b interface and a 12 bit or 14 bit ADC. Like all other AVT cameras, the Guppy PRO has a very robust metal housing with locking screw connectors. Guppy PRO cameras have an outstanding price/performance ratio.

Options

- Modular concept:
  - Various IR cut/pass filters
  - White medical housing

Smart Features

- AOI, separate AOI for auto features
- Gain, exposure
- Programmable LUT, gamma
- Debayering, color correction
- Binning (b/w, only Guppy PRO F-503: color binning)
- Sub-sampling (b/w)
- Defect pixel correction (only Guppy PRO F-503)
- Image mirror (only Guppy PRO F-503)

Operating Conditions

Power requirements	DC 8 V - 36 V via 1394 cable or HIROSE
Power consumption	typ. 3 W (@ 12 V DC)
Operating temperature	+5 ... +45 °Celsius ambient temp.
Storage temperature	-10 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class B, RoHS (2002/95/EC)

Prosilica GC. Compact performance.

Prosilica GC

- Fast frame rates
- Ultra-compact, lightweight housing
- Large choice of CCD and CMOS sensors
- Fits a wide range of applications

Prosilica GC								L x W x H = 51-59 x 46 x 33 mm incl. connectors, w/o tripod and lens. Mass < 112 g
Model	**Interface**	**Resolution**	**MPixels**	**Frame rate**	**Sensortype**	**Sensor**	**A/D**	**Memory**
GC650	GigE	659 x 493	0.3	90 fps	1/3 CCD	Sony ICX424	12 bits	16 MB
GC655	GigE	659 x 493	0.3	90 fps	1/2 CCD	Sony ICX414	12 bits	16 MB
GC660	GigE	659 x 493	0.3	119 fps	1/4 CCD	Sony ICX618	12 bits	16 MB
GC750*	GigE	752 x 480	0.4	60 fps	1/3 CMOS	Aptina MT9V022	10 bits	16 MB
GC780	GigE	782 x 582	0.3	64 fps	1/2 CCD	Sony ICX415	12 bits	16 MB
GC1020	GigE	1024 x 768	0.8	33 fps	1/3 CCD	Sony ICX204	12 bits	16 MB
GC1290	GigE	1280 x 960	1.2	32 fps	1/3 CCD	Sony ICX445	12 bits	16 MB
GC1350	GigE	1360 x 1024	1.4	20 fps	1/2 CCD	Sony ICX205	12 bits	16 MB
GC1380	GigE	1360 x 1024	1.4	20 fps	2/3 CCD	Sony ICX285	12 bits	16 MB
GC1380H	GigE	1360 x 1024	1.4	30 fps	2/3 CCD	Sony ICX285	12 bits	16 MB
GC1600	GigE	1620 x 1220	2	15 fps	1/1.8 CCD	Sony ICX274	12 bits	16 MB
GC1600H	GigE	1620 x 1220	2	25 fps	1/1.8 CCD	Sony ICX274	12 bits	16 MB
GC2450	GigE	2448 x 2050	5	15 fps	2/3 CCD	Sony ICX625	12 bits	16 MB

*Standard version with CS-Mount

Prosilica GC Cameras

The Prosilica GC is a GigE camera with an ultra-compact, lightweight housing, fast frame rates and auto-iris control. It offers a large choice of CCD and CMOS sensors up to 5 Megapixels and fits a wide range of applications.

Options

- CS-Mount adapters (CS-Mount not applicable for type 2/3 sensors and larger)
- IR cut filter on monochrome cameras

Operating Conditions

Power requirements	DC 5 V - 25 V via 12-pin HIROSE
Power consumption	< 4 W (@ 12 V DC)
Operating temperature	+0 ... +50 °Celsius ambient temp.
Storage temperature	-10 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class A, RoHS (2002/95/EC)

Smart Features

- Video-type auto-iris
- ROI (Region of Interest Readout)
- Gain, exposure
- White balance
- DSP subregion (selectable ROI for auto features)
- Binning (only CCD cameras)
- Image hold
- Recorder mode (pre/post trigger recording)
- StreamBytesPerSecond (easy bandwidth control)
- Event Channel
- Chunk data
- Storable user sets

Manta. Industrial flexibility.

Manta

- Very economical price
- Three programmable 12-bit LUTs, color correction
- Modular design, large choice of variants
- Power over Ethernet option (PoE)

***All data for these cameras are preliminary**

Manta									L x W x H = 86.4 x 44 x 29 mm incl. connectors, w/o tripod and lens. Mass < 200 g
Model		**Interface**	**Resolution**	**MPixels**	**Frame rate**	**Sensortype**	**Sensor**	**A/D**	**Memory**
G-031B/C	**NEW**	GigE	652 x 492	0.3	125 fps	1/4 CCD	Sony ICX618	14 bits	32 MB
G-032B/C		GigE	656 x 492	0.3	80 fps	1/3 CCD	Sony ICX424	12 bits	32 MB
G-033B/C		GigE	656 x 492	0.3	88 fps	1/2 CCD	Sony ICX414	14 bits	32 MB
G-046B/C		GigE	780 x 580	0.5	67 fps	1/2 CCD	Sony ICX415	14 bits	32 MB
G-095C	**NEW**	GigE	1292 x 734	0.9	40 fps	1/3 CCD	Sony ICX692	14 bits	32 MB
G-125B/C		GigE	1292 x 964	1.2	30 fps	1/3 CCD	Sony ICX445	14 bits	32 MB
G-145B/C (-30fps)		GigE	1388 x 1038	1.4	16/31 fps	2/3 CCD	Sony ICX285	14 bits	32 MB
G-145B NIR		GigE	1388 x 1038	1.4	15 fps	2/3 CCD	Sony ICX285	14 bits	32 MB
G-146B/C		GigE	1388 x 1038	1.4	17 fps	1/2 CCD	Sony ICX267	14 bits	32 MB
G-201B/C (-30fps)		GigE	1624 x 1234	2	14/30 fps	1/1.8 CCD	Sony ICX274	14 bits	32 MB
G-282B/C *	**NEW**	GigE	1936 x 1458	2.8	17/30 fps	1/1.8 CCD	Sony ICX687	14 bits	32 MB
G-283B/C *	**NEW**	GigE	1936 x 1458	2.8	17/30 fps	2/3 CCD	Sony ICX674	14 bits	32 MB
G-504B/C		GigE	2452 x 2056	5	9 fps	2/3 CCD	Sony ICX655	14 bits	32 MB
G-505B/C*	**NEW**	GigE	2452 x 2056	5	15 fps	2/3 CCD	Sony ICX625	14 bits	32 MB
G-609B/C*	**NEW**	GigE	2752 x 2206	6	8/15 fps	1/1 CCD	Sony ICX694	14 bits	32 MB

Manta Cameras

The Manta is a very economically priced GigE camera. Equipped with programmable LUTs and sophisticated color correction algorithms, the Manta outperforms other GigE cameras in this price class. In addition, board level versions as well as modular options are available. The robust metal housing features optimal quality to ensure a long lifetime. Manta G-282, G-283, G-609 come with switchable single tap/dual tap modes.

Options

- Board level versions available
  - Remote sensor head, cable up to 200 mm
- Modular concept:
  - Various IR cut/pass filters
  - CS/M12-Mount adapters
  - Angled head
  - White medical housing
  - Power over Ethernet
  - Removed cover glass (Manta G-145 only)

Smart Features

- Video-type auto-iris
- ROI (Region of Interest Readout)
- Gain, exposure, white balance
- DSP subregion (selectable ROI for auto features)
- Hue, Saturation, Sharpness
- Three programmable LUTs, gamma
- Binning, decimation/sub-sampling (not Manta G-032B/C)
- Image hold
- StreamBytesPerSecond (easy bandwidth control)
- Event channel, chunk data
- Recorder mode (pre/post trigger recording)
- Five storable user sets
- Manta G-282, G-283, G-609: switchable single tap/dual tap

Operating Conditions

Power requirements	DC 8 V - 30 V via 12-pin HIROSE/PoE
Power consumption	< 3.6 W; 30fps/PoE <4.6 W (@ 12 V DC)
Operating temperature	+0 ... +45 °Celsius ambient temp.
Storage temperature	-10 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class B, RoHS (2002/95/EC)

Prosilica GT. Weather persistent.

Prosilica GT

- Wide operating temperature range
- High sensitivity and high speed
- P-iris and DC auto iris lens control
- PoE (Power over Ethernet)

***All data for these cameras are preliminary**

Prosilica GT — L x W x H = 83.2 - 92 x 53 x 33 mm incl. connectors, w/o tripod and lens. Mass 211 -229 g

Model	Interface	Resolution	MPixels	Frame rate	Sensortype	Sensor	A/D	Memory
GT1290	GigE	1280 x 960	1.2	33 fps	1/3 CCD	Sony ICX445	14 bits	128 MB
GT1380	GigE	1360 x 1024	1.4	30 fps	2/3 CCD	Sony ICX285	14 bits	128 MB
GT1600	GigE	1620 x 1220	2	25 fps	1/1.8 CCD	Sony ICX274	14 bits	128 MB
GT1660 **NEW**	GigE	1600 x 1200	1.9	62 fps	2/3 CCD	Kodak KAI-02050	14 bits	128 MB
GT1910	GigE	1920 x 1080	2	57 fps	2/3 CCD	Kodak KAI-02150	14 bits	128 MB
GT1920	GigE	1936 x 1456	2.8	40 fps	2/3 CCD	Sony ICX674	14 bits	128 MB
GT2000* **NEW**	GigE	2048 x 1088	2.2	50 fps	2/3 CMOS	CMOSIS CMV-2000	12 bits	128 MB
GT2050* **NEW**	GigE	2048 x 2048	4.2	25 fps	1/1 CMOS	CMOSIS CMV-4000	12 bits	128 MB
GT2300	GigE	2336 x 1752	4	29 fps	1/1 CCD	Kodak KAI-04050	14 bits	128 MB
GT2450	GigE	2448 x 2050	5	15 fps	2/3 CCD	Sony ICX625	14 bits	128 MB
GT2750*	GigE	2750 x 2200	6	19 fps	1/1 CCD	Sony ICX694	14 bits	128 MB
GT3300** **NEW**	GigE	3296 x 2472	8	14 fps	4/3 CCD	Kodak KAI-08050	14 bits	128 MB
GT6600** **NEW**	GigE	6576 x 4384	29	4 fps	35 mm CCD	Kodak KAI-29050	14 bits	128 MB

** L x W x H = 121 x 59.7 x 59.7 mm. Mass = 314 g

Prosilica GT Cameras

The Prosilica GT is prepared to face the elements. Designed for ITS and outdoor imaging in extreme temperatures as well as fluctuating lighting conditions, the GT is geared up with a rugged, thermally engineered housing and motorized lens control. It's also packing the most sensitive Sony EXview HAD CCD sensors, CMOSIS sensors, an advanced feature set and a Power over Ethernet connection.

Operating Conditions

Power requirements	DC 7 V - 25 V via 12-pin HIROSE/PoE
Power consumption	< 5.5 W (@ 12 V DC)
Operating temperature	-20 ... +60 °Celsius ambient temp.
Storage temperature	-20 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class A, RoHS (2002/95/EC)

Smart Features

- Auto iris (P-iris/Precise iris and DC)
- Gain, exposure
- White balance
- Programmable lookup tables
- Gamma
- Color correction
- Binning
- Image hold
- Clock synchronization (PTP IEEE 1588)
- StreamBytesPerSecond (easy bandwidth control)
- Chunk data
- Recorder mode (pre/post trigger recording)
- Storable user sets

Stingray. Transformer camera.

Stingray

- Excellent image quality
- Advanced feature set
- Modular design: Large choice of variants
- Board level versions available

Stingray	L x W x H = 72.9 x 44 x 29 mm incl. connectors, w/o tripod and lens. Mass 92 g

Model	Interface	Resolution	MPixels	Frame rate	Sensortype	Sensor	A/D	Memory
F-033B/C	1394b	656 x 492	0.3	84 fps	1/2 CCD	Sony ICX414	14 bits	32 MB
F-046B/C	1394b	780 x 580	0.5	61 fps	1/2 CCD	Sony ICX415	14 bits	32 MB
F-080B/C	1394b	1032 x 776	0.8	31 fps	1/3 CCD	Sony ICX204	14 bits	32 MB
F-125B/C	1394b	1292 x 964	1.2	30 fps	1/3 CCD	Sony ICX445	14 bits	32 MB
F-145B/C	1394b	1388 x 1038	1.4	16 fps	2/3 CCD	Sony ICX285	14 bits	32 MB
F-146B/C	1394b	1388 x 1038	1.4	15 fps	1/2 CCD	Sony ICX267	14 bits	32 MB
F-201B/C	1394b	1624 x 1234	2	14 fps	1/1.8 CCD	Sony ICX274	14 bits	32 MB
F-504B/C	1394b	2452 x 2056	5	9 fps	2/3 CCD	Sony ICX655	14 bits	64 MB

Stingray Cameras

The Stingray is a versatile, powerful FireWire camera even for challenging applications. Its modular and flexible design provides a large choice of variants. Stingray cameras have an excellent image quality and incorporate an advanced set of real-time features.

Options

- Board level versions available
- Modular concept:
  - Various IR cut/pass filters
  - CS/M12-Mount
  - Angled head
  - Hirose power: out
  - 1394b connectors: 2 x copper or 1 x GOF, 1 x copper
  - Compact housing version
  - White medical housing
  - Removed cover glass (Stingray F-145 only)

Smart Features

- AOI, separate AOI for auto features
- Programmable LUT, white balance, hue, saturation
- Gain, exposure
- Debayering, color correction
- Shading correction
- High SNR mode (up to 24 dB better signal-to-noise ratio)
- Sub-sampling, binning (b/w)
- Low noise binning mode
- Defect pixel correction
- Sequence mode (changes the camera settings on the fly)
- Image mirror
- Deferred image transport
- SIS (Secure Image Signature, enhanced time stamp)
- Storable user settings

Operating Conditions

Power requirements	DC 8 V - 36 V via 1394 cable or HIROSE
Power consumption	typ. < 4 W (@ 12 V DC)
Operating temperature	+5 ... +45 °Celsius ambient temp.
Storage temperature	-10 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class B, RoHS (2002/95/EC)

Prosilica GS. A different angle.

Prosilica GS

- Periscope-type GigE camera, very compact housing
- Fast frame rates
- Landscape or portrait sensor orientation
- Single-board version: Prosilica GB series

Prosilica GS/Prosilica GB — L x W x H = 96 x 56 x 26 mm incl. connectors, w/o tripod and lens. Mass < 186 g (GS)

Model	Interface	Resolution	MPixels	Frame rate	Sensortype	Sensor	A/D	Memory
GS/GB650	GigE	659 x 493	0.3	120 fps	1/3 CCD	Sony ICX424	14 bits	16 MB
GS/GB660	GigE	659 x 493	0.3	119 fps	1/4 CCD	Sony ICX618	14 bits	16 MB
GS/GB1380	GigE	1360 x 1024	1.4	30 fps	2/3 CCD	Sony ICX285	14 bits	16 MB
GS/GB2450	GigE	2448 x 2050	5	15 fps	2/3 CCD	Sony ICX625	14 bits	16 MB

Prosilica GS Cameras

The Prosilica GS is a rugged GigE camera with fast frame rates and a unique periscope-type form factor. Some models are available with landscape or portrait sensor orientation. The credit-card sized single-board version camera (Prosilica GB) is also available with flexible connector orientation.

Smart Features

- ROI (Region of Interest Readout)
- Gain, exposure
- White balance
- DSP subregion (selectable ROI for auto features)
- Binning
- Image hold
- StreamBytesPerSecond (easy bandwidth control)
- Event Channel
- Chunk data
- Recorder mode (pre/post trigger recording)
- Storable user sets

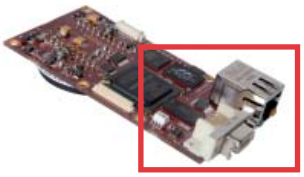
Operating Conditions

Power requirements	DC 5 V - 25 V via 12-pin HIROSE
Power consumption	< 3.9 W (@ 12 V DC)
Operating temperature	+0 ... +50 °Celsius ambient temp.
Storage temperature	-10 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class A, RoHS (2002/95/EC)

Options

- CS-Mount
- Landscape or portrait sensor orientation (GS/GB 650 and 1380)
- In-line connectors or vertical connectors (GB cameras)
- IR cut filter on monochrome cameras
- White medical housing (only GS cameras)

Landscape (standard) **Portrait**



In-line connectors (standard)

Vertical connectors

Prosilica GB, board size (W x L) = 51 x 89 mm. Mass <60g

Bigeye. Keep cool.

Bigeye

- Prime quality low noise cooled CCD cameras
- Invincible signal-to-noise ratio
- Peltier cooling for long exposure times
- NIR optimized cameras available

Bigeye L x W x H = 89-143 x 90 x 71-109 mm incl. connectors, w/o tripod and lens. Mass 730-1460 g

Model	Interface	Resolution	MPixels	Frame rate	Sensortype	Sensor	A/D
G-283B Cool **NEW**	GigE	1928 x 1452	2.8	6 fps	2/3 CCD	Sony ICX674	14 bits
P-132B/C Cool	GigE	1280 x 1024	1.3	12.5 fps	2/3 CCD	Sony ICX285	14 bits
P-132B NIR Cool	GigE	1280 x 1024	1.3	12.5 fps	2/3 CCD	Sony ICX285	14 bits
P-629B Cool	GigE	3072 x 2048	6	0.67 fps	35 mm CCD	Kodak KAF-6303E	14 bits
P-629B NIR Cool	GigE	3072 x 2048	6	0.67 fps	35 mm CCD	Kodak KAF-6303E	14 bits
P-1100B/C Cool	GigE	4024 x 2680	11	1.6 fps	35 mm CCD	Kodak KAI-11002	14 bits

Bigeye Cameras

The Bigeye is an excellent low noise CCD camera. It satisfies even the highest expectations for excellent image quality. The peltier cooling provides for an invincible signal-to-noise-ratio even with very long exposure times. Bigeye cameras are ideal for very demanding applications, like low light microscopy or non-destructive evaluation of photosensitive objects.

Operating Conditions

Power requirements	DC 12 V via Mini D Ribbon interface (-G)
Power requirements	DC 12 V via 15-pin D-Sub interface (-P)
Power consumption	≤ 36 W (@ 12 V DC)
Operating temperature	0 ... +35 °C ambient temp.
Storage temperature	-30 ... +70 °C ambient temp.
Regulations	CE, RoHS (2002/95/EC)

Bigeye NIR Cameras

The spectral ranges of Bigeye NIR cameras are optimized for both the visible spectrum and the NIR spectrum. They allow to realize demanding applications with just one camera.

Options

- On request: Camera Link interface

Peltier Cooling

- G-283B Cool with Peltier cooling to -10 °C absolute
- P-132B/C Cool with Peltier cooling to -20 °C absolute
- P-629B Cool with Peltier cooling to +5 °C absolute
- P-1100B/C Cool with Peltier cooling to 0 °C absolute

Smart Features

- Binning, double maximum frate rate possible
- Gain, exposure
- Only Bigeye G-283B Cool: gamma, video-type auto-iris
- Continuous mode (image acquisition with max. frame rate)
- Image on Demand mode (triggered image acquisition)

Pike. High-end FireWire.

Pike

FireWire

- VGA to 16 Megapixels
- Fast frame rates
- Advanced feature set
- Modular design: Large choice of variants

Pike								L x W x H = 96.8 x 44 x 44 mm incl. connectors, w/o tripod and lens. Mass = 250 g
Model	**Interface**	**Resolution**	**MPixels**	**Frame rate**	**Sensortype**	**Sensor**	**A/D**	**Memory**
F-032B/C	1394b	640 x 480	0.3	208 fps	1/3 CCD	Kodak KAI-0340	14 bits	64 MB
F-100B/C	1394b	1000 x 1000	1	60 fps	2/3 CCD	Kodak KAI-1020	14 bits	64 MB
F-145B/C	1394b	1388 x 1038	1.4	30 fps	2/3 CCD	Sony ICX285	14 bits	64 MB
F-210B/C	1394b	1920 x 1080	2	31 fps	1.0 CCD	Kodak KAI-2093	14 bits	64 MB
F-421B/C	1394b	2048 x 2048	4.2	16 fps	1.2 CCD	Kodak KAI-04022	14 bits	64 MB
F-505B/C	1394b	2452 x 2054	5	15 fps	2/3 CCD	Sony ICX625	14 bits	64 MB
F-1100B/C*	1394b	4008 x 2672	11	5 fps	35 mm CCD	Kodak KAI-11002	14 bits	256 MB
F-1600B/C*	1394b	4872 x 3248	16	3 fps	35 mm CCD	Kodak KAI-16000	14 bits	256 MB

* F-Mount housing, L x W x H = 137 x 60 x 60 mm. Mass = 380 g

Pike Cameras

Pike cameras include fast Kodak sensors and a rich set of advanced real-time features. The Pike is a very fast IEEE 1394b camera for demanding applications. Pike cameras are available both with daisy-chain copper ports and with copper/GOF (glass optical fiber) ports.

Options

- Modular concept:
  - Various IR cut/pass filters
  - F-Mount (F-032 only: CS-Mount, M12-Mount)
  - Pike F-1100/F-1600: M42/M58-Mount
  - Angled head, white medical housing
  - Hirose power: out
  - 1394b connectors: 2 x copper or 1 x GOF, 1 x copper
- Sensor variants: Taped cover glass w/o microlenses, fixed quartz cover glass w/o microlenses available for some models

Smart Features

- Switchable tap readout (only Pike F-1100 and Pike F-1600)
- AOI, separate AOI for auto features
- Programmable LUT
- White balance, hue, saturation
- Gain, exposure
- Color correction
- Shading correction
- High SNR mode (up to 24 dB better signal-to-noise ratio)
- Smear reduction (not Pike F-1100/F-1600)
- Defect pixel correction (only Pilke F-1100/F1600)
- Sub-sampling, 2x - 8x binning (b/w)
- Sequence mode (changes the image settings on the fly)
- Image mirror
- Deferred image transport
- SIS (Secure Image Signature, enhanced time stamp)
- Storable user settings

Operating Conditions

Power requirements	DC 8 V - 36 V via 1394 cable or HIROSE
Power consumption	typ. < 4 W @ 12 V DC, < 6 W (11/16 MP)
Operating temperature	+5 ... +50 °Celsius housing temp.
Storage temperature	-10 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class B, RoHS (2002/95/EC)

Prosilica GE. Kodak your life.

Prosilica GE

- Fast frame rates
- VGA to 16 Megapixels
- Large choice of Kodak sensors
- Flexible binning up to 8 x 1000

Prosilica GE						L x W x H = 80 x 51 x 39 mm incl. connectors, w/o tripod and lens. Mass < 180g (C-Mount)		
Model	**Interface**	**Resolution**	**MPixels**	**Frame rate**	**Sensortype**	**Sensor**	**A/D**	**Memory**
GE680	GigE	640 x 480	0.3	205 fps	1/3 CCD	Kodak KAI-0340	12 bits	32 MB
GE1050	GigE	1024 x 1024	1	59 fps	1/2 CCD	Kodak KAI-01050	12 bits	32 MB
GE1650	GigE	1600 x 1200	2	32 fps	1.0 CCD	Kodak KAI-2020	12 bits	32 MB
GE1660	GigE	1600 x 1200	2	34 fps	2/3 CCD	Kodak KAI-02050	12 bits	32 MB
GE1900	GigE	1920 x 1080	2	30 fps	1.0 CCD	Kodak KAI-2093	12 bits	32 MB
GE1910	GigE	1920 x 1080	2	32 fps	2/3 CCD	Kodak KAI-02150	12 bits	32 MB
GE2040	GigE	2040 x 2048	4	15 fps	1.2 CCD	Kodak KAI-04022	12 bits	32 MB
GE4000*	GigE	4008 x 2672	11	5 fps	35 mm CCD	Kodak KAI-11002	12 bits	32 MB
GE4900*	GigE	4872 x 3248	16	3 fps	35 mm CCD	Kodak KAI-16000	12 bits	32 MB

* F-Mount housing, L x W x H = 111 x 66 x 66 mm. Mass < 369 g

Prosilica GE Cameras

Prosilica GE cameras offer very fast frame rates, flexible binning options (up to 8 x 1000) and programmable Mini-SMB connectors on the back, which facilitate triggering in multi-camera applications.

Operating Conditions

Power requirements	DC 5 V - 24 V via auxiliary power port
Power consumption	< 3.0 W (@ 12 V DC)
Operating temperature	+0 ... +50 °Celsius ambient temp.
Storage temperature	- 0 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class A, RoHS (2002/95/EC)

Smart Features

- ROI (Region of Interest Readout)
- Gain, exposure
- White balance
- DSP subregion (selectable ROI for auto features)
- Binning
- Image hold
- StreamBytesPerSecond (easy bandwidth control)
- Event Channel
- Chunk data
- Recorder mode (pre/post trigger recording)
- Storable user sets

Options

- CS-Mount (only GE680, GE1050)
- F-Mount (except for GE4000, GE4900)
- Taped cover glass (except for GE1050), for some models available with or without microlenses
- EF-Mount adapter (only GE4000, GE4900)
- IR cut filter on monochrome cameras
- Kodak Class 1 and Class 0 sensors (only GE4000/4900)

Prosilica GX. Shift up to double speed.

Prosilica GX

- High resolution with very fast frame rates
- LAG (Link Aggregation Group) technology
- 3-axis motorized lens control and auto-iris controls
- Latest Kodak and Sony CCD sensors

All data for GX6600 are preliminary

Prosilica GX — L x W x H = 107-108 x 53 x 33 mm incl. connectors, w/o tripod and lens. Mass = 270-365 g

Model	Interface	Resolution	MPixels	Frame rate	Sensortype	Sensor	A/D	Memory
GX1050	GigE*	1024 x 1024	1	112 fps	1/2 CCD	Kodak KAI-01050	14 bits	128 MB
GX1660	GigE*	1600 x 1200	2	66 fps	2/3 CCD	Kodak KAI-02050	14 bits	128 MB
GX1910	GigE*	1920 x 1080	2	63 fps	2/3 CCD	Kodak KAI-02150	14 bits	128 MB
GX1920	GigE*	1936 x 1456	2.8	40 fps	2/3 CCD	Sony ICX674	14 bits	128 MB
GX2300	GigE*	2336 x 1752	4	32 fps	1/1 CCD	Kodak KAI-04050	14 bits	128 MB
GX2750	GigE*	2750 x 2200	6	19 fps	1/1 CCD	Sony ICX694	14 bits	128 MB
GX3300	GigE*	3296 x 2472	8	17 fps	4/3 CCD	Kodak KAI-08050	14 bits	128 MB
GX6600**	GigE*	6576 x 4384	29	4 fps	35 mm CCD	Kodak KAI-29050	14 bits	128 MB

*Double-speed GigE Vision interface (240 MB/s)
**Housing with F-Mount, note: larger dimensions including the mount (diameter = 60 mm, L = 136 mm)

Prosilica GX Cameras

The Prosilica GX, with its double-speed GigE interface, is the first GigE Vision camera to feature LAG technology. Additional features include 3-axis motorized lens control as well as video-type auto-iris controls.

Smart Features

- LAG Technology - 240 MB/s
- 3-axis motorized lens control
- Video-type autoiris
- ROI (Region of Interest Readout)
- Gain, exposure
- White balance
- DSP subregion (selectable ROI for auto features)
- Binning
- Image hold
- StreamBytesPerSecond (easy bandwidth control)
- Event Channel
- Chunk data
- Recorder mode (pre/post trigger recording)
- Storable user sets

LAG GigE interface
and lens control port

Options

- CS-Mount (only GX1050)
- F-Mount (only GX1050, GX1660, GX1910, GX1920, GX2300)
- EF-Mount adapter
- Taped cover glass w/o or with microlenses (not for GX1050 and GX1920)
- IR cut filter on monochrome cameras

LAG Technology

LAG = Link Aggregation Group (IEEE 802.3ad)
The LAG technology has been used in IT networking for years and is supported by a wide range of standard Ethernet hardware (switches, interface cards, etc.). When the camera is connected by two cables to the host computer, it sees the camera as one connection at twice the normal speed (240 MB/s). The Prosilica GX can also operate using a single standard CAT-5e Ethernet cable at 120 MB/s.

Operating Conditions

Power requirements	DC 5 V - 24 V via 12-pin HIROSE
Power consumption	< 7.2 W (@ 12 V DC)
Operating temperature	+0 ... +50 °Celsius ambient temp.
Storage temperature	-10 ... +70 °Celsius ambient temp.
Regulations	CE, FCC Class A, RoHS (2002/95/EC)

Bonito. High speed, high resolution.

Bonito

- High speed Camera Link interface
- Sensitive CMOS sensor, global shutter
- Very compact and lightweight
- Robust metal housing for industrial use

Bonito	L x W x H (C-Mount) = 44.2 x 80 x 70 mm incl. connectors, w/o tripod and lens. Mass 360 g							
Model	**Interface**	**Resolution**	**MPixels**	**Frame rate**	**Sensortype**	**Pixel size**	**Sensitive area**	**A/D**
CL-400B/C	2 x 10-tap Camera Link Full+	2320 x 1726	4	386 fps	4/3 CMOS	7 x 7 µm	16.24 x 12.08 mm	10 bits
CL-400B/C 200 fps	1 x 10-tap Camera Link Full+	2320 x 1726	4	193 fps	4/3 CMOS	7 x 7 µm	16.24 x 12.08 mm	10 bits

Bonito Cameras

The Bonito is a prime quality high speed camera. It includes a very sensitive global shutter CMOS sensor and suits for fast image acquisition of still and moving objects. Bonito cameras are the perfect choice for applications which require fast frame rates and excellent image quality. Their robust and lightweight metal housing is designed for industrial use.

Smart Features

- ROI (Region of Interest)
- Fixed pattern noise (FPN) correction
- Digital gain (selects 8 of 10 bits for output)
- Exposure time ≥ 1.5 µs
- Offset (brightness)
- Continuous mode (image acquisition with max. frame rate)
- Image on Demand mode (triggered image acquisition)

Options

- Available with C/F-/EF-Mount

Operating Conditions

Power requirements	DC 12 V via 15-pin D-Sub interface
Power consumption	4.2 W (@ 12 V DC)
Operating temperature	0 ° ... +45 °Celsius ambient temp.
Storage temperature	-30 ... +70 °Celsius ambient temp.
Regulations	CE, RoHS (2002/95/EC)

Goldeye. Infrared sees more.

Goldeye

- InGaAs NIR/SWIR sensors, spectral response 900 - 1700 nm
- 14-bit digital processing
- Robust metal housing for industrial use
- Optional peltier cooling

Goldeye L x W x H (C-Mount) = 71-116 x 90 x 71-99 mm incl. connectors, w/o tripod and lens. Mass 600-1420 g

Model	Interface	Resolution	Frame rate	Sensor	Pixel size	Sensitive area	A/D
P-008 SWIR	GigE	320 x 256	100 fps	InGaAs	30 µm x 30 µm	9.6 mm x 7.68 mm	14 bits
P-032 SWIR	GigE	636 x 508	30 fps	InGaAs	25 µm x 25 µm	15.9 mm x 12.7 mm	14 bits

Goldeye SWIR Cameras

Goldeye SWIR cameras incorporate high-performance InGaAs sensors. They are very sensitive in the NIR/SWIR spectrum, show excellent linearity, and tolerate intense illumination. Thanks to the 14-bit processing and the numerous image correction features, Goldeye cameras produce an outstanding, low-noise image quality.

Applications

- Thermal imaging of hot objects (> 200 °C)
- Water or moisture detection
- IR-spectroscopy
- Laser beam profiling
- Semiconductor inspection
- Vision enhancement
- Plastic sorting
- Medical science and biology

Options

- Camera Link interface (Goldeye CL-008 NIR, CL-032 NIR)
- Peltier cooling 0 °C absolute (Goldeye P/CL-008)
- F-Mount (only Goldeye P/CL-032)

Operating Conditions

Power requirements	DC 12 V via 15-pin D-Sub interface
Power consumption	6 - 34 W depending on model and cooling
Operating temperature	0°... +40° Celsius ambient temp. (Cool)
Storage temperature	-30 ... +70° Celsius ambient temp.
Regulations	CE, RoHS (2002/95/EC)

Smart Features

- Gain, exposure
- On-chip high gain mode
- Shipped with built-in correction data sets
- Non-uniformity correction (NUC)
- Bad pixel correction
- Background correction
- Goldeye P/CL-032: Peltier cooling -5 °C absolute (peltier cooling for Goldeye P/CL-008 is optional)

Pearleye. See the heat.

Pearleye GiGE VISION

- Uncooled microbolometer sensors, LWIR 8 - 14 µm
- NETD < 80 mK, temperature range -20 °C to +200 °C
- With temperature stabilizing and correction features
- Built-in electromechanical shutter, robust housing

Pearleye — L x W x H = 133.7 x 90 x 86 mm incl. connectors, incl. lens. Mass 790-830 g

Model	Interface	Resolution	Frame rate	Sensor		Pixel size	Sensitive area	A/D
P-007 LWIR*	GigE	320 x 240	40 fps	Microbolometer	ULIS UL 03 08 1	35 µm x 35 µm	11.2 mm x 8.4 mm	14 bits
P-030 LWIR**	GigE	640 x 480	24 fps	Microbolometer	ULIS UL 04 17 1	25 µm x 25 µm	16 mm x 12 mm	14 bits

*Standard lens: 18 mm f/1.0, field of view 35° x 26°

**Standard lens: 18 mm f/1.0, field of view 47.9° x 36.9°

Pearleye LWIR Cameras

Pearleye LWIR cameras are distinguished by their uncooled microbolometer sensors and a temperature reference element. With their maintenance-free sensors, the built-in long-life calibration shutter and the many image correction features, Pearleye cameras are ideally suited for industrial and scientific demands.

Smart Features

- Shipped with various built-in correction data sets
- Error pixel correction
- Background (FPN) correction
- Bad pixel correction
- Non-uniformity correction (NUC)
- Drift compensation
- Temperature linearization (LUT)
- Temperature Peltier stabilized

Applications

- Surveillance
- Automation
- Quality control
- Science and research
- Non-destructive testing
- Medical imaging
- Early fire detection
- Paper recycling, waste sorting

Options

- Other lenses available on request
- Pearleye P-007 LWIR High Temp: 0 °C to +200 °C (standard: -20 °C to +80 °C)
- Other temperature ranges on request

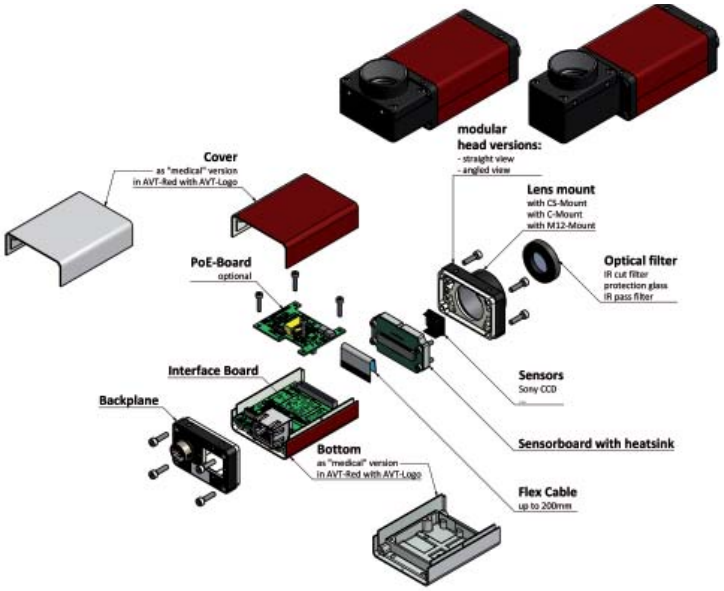
Operating Conditions

Power requirements	DC 12 V via 15-pin D-Sub interface
Power consumption	≤ 18 W (@ 12 V DC)
Operating temperature	+15 ... +50 °C internal sensor temp.
Storage temperature	-30 ... +70 °Celsius ambient temp.
Regulations	CE, RoHS (2002/95/EC)

The AVT Modular Concept

In addition to a comprehensive selection of standard cameras, AVT also offers customized cameras. Many customizing requirements can be covered by the Modular Concept. It provides a list of options to change the camera's form factor, optical filters, and some other options like PoE (Power over Ethernet), angled heads, or several lens mounts. The Modular Concept is available for all AVT cameras. **Each camera family offers different modular options.**

Benefits of the modular concept
- Reduces customizing effort
- Permits immediate orders
- Leads to quick delivery times
- Offers transparent pricing
- Optimizes the cameras for your needs



Modular options for Manta cameras

Software by Allied Vision Technologies

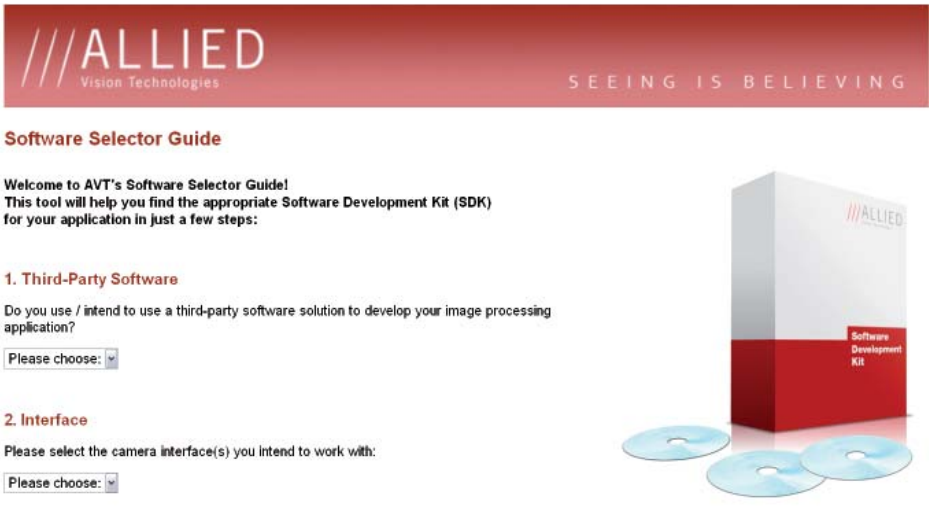
AVT Software Packages

All software development kits (SDKs) by AVT are **free of charge** and contain the following components:
- The required drivers to integrate the cameras into your system
- An easy to use driver installation tool
- An application programming interface (API) for camera control and image acquisition
- A viewer application to test the cameras and evaluate features
- Examples based on the SDK's provided APIs

AVT Software Selector Guide

To find the right software package for integrating AVT cameras into your application, we recommend using the AVT Software Selector Guide on our website. AVT offers several software packages and library interfaces which help to develop powerful applications quickly and easily. This interactive guide will help you to find the right AVT package for integrating AVT cameras into your application.

Online Software Selector Guide on alliedvisiontec.com
www.alliedvisiontec.com/emea/products/software.html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SEEING IS BELIEVING
Software Selector Guide
Welcome to AVT's Software Selector Guide!
This tool will help you find the appropriate Software Development Kit (SDK)
for your application in just a few steps:
1. Third-Party Software
Do you use / intend to use a third-party software solution to develop your image processing application?
Please choose:
2. Interface
Please select the camera interface(s) you intend to work with:
Please choose:

Third-Party Solutions

AVT's cameras can easily be integrated into common third-party vision software solutions. They conform to the current standards for digital industrial cameras.

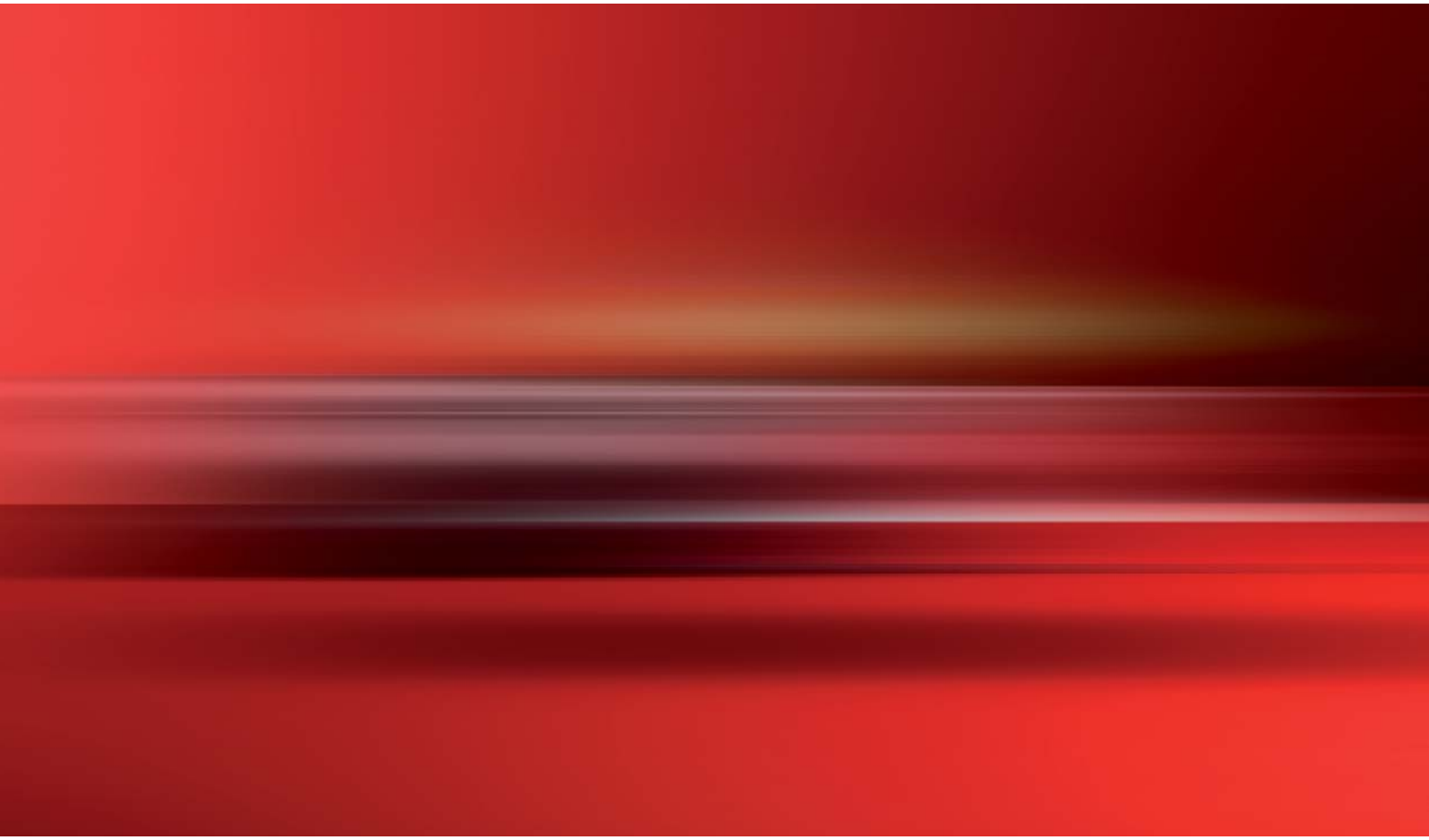
There is a wide range of third-party software solutions compatible with AVT cameras, such as libraries, SDKs, integrated development environments, vision applications and tools, and drivers. Allied Vision Technologies works in close cooperation with its certified partners to assure AVT camera users easy installation, tested compatibility and strong support.

AVT CERTIFIED VISION SOFTWARE PARTNER

More information:
www.alliedvisiontec.com/3rd-party

Operating Systems

Allied Vision Technologies provides software packages (SKDs) for all common operating systems:
- Windows
- Linux
- Mac OS X
- QNX



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